The Pending Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A entrained-flow gasification reactor for gasification of combustion, residual and waste materials containing carbon and ash using an oxygen-containing oxidizing agent at temperatures above the melting point of the inorganic parts of said combustion, residual and waste materials at a pressure between ambient pressure and 60 bar, comprising:

a entrained-flow gasification reaction chamber;

a refractory-grade lining configured to form a first, upper part of said reaction chamber; and

a cooling wall configured to form a second, lower part of said reaction chamber, said second part of said reaction chamber including a lower floor and a lower outlet opening, said cooling wall including cooling coils connected in a gas-tight manner, said cooling coils being coated with a heat-conducting ceramic layer and operated, while being cooled by pressurized water, below or above the boiling point of the cooling water, said refractory-grade lining extending downward in a direction parallel to sidewalls of said reactor chamber over said cooling wall in an area of said second part of said reaction chamber including an area of said lower floor, such that said refractory-grade lining and said cooling wall are joined in an overlapping fashion to compensate for different heat expansions.

2. (previously presented) The entrained-flow gasification reactor of claim 1, wherein said reactor is operated at a pressure between ambient pressure and 30 bar.

3. (previously presented) The entrained-flow gasification reactor of claim 1, wherein said cooling wall of said reaction chamber comprises a double-mantle design with a cooling space.

4. (previously presented) The entrained-flow gasification reactor of claim 1, wherein said second part of said reaction chamber includes a lower floor and a lower outlet opening.

5. (previously presented) The entrained-flow gasification reactor of claim 4, wherein said cooling wall of said reaction chamber is limited to said lower outlet opening.

6. (previously presented) The entrained-flow gasification reactor of claim 4, further comprising a cylindrical mantle surrounding said reaction chamber, and cooling means to cool said lower floor and said lower outlet opening of said reaction chamber, said cooling means being connected in series or in parallel with said cylindrical mantel.

7. (previously presented) The entrained-flow gasification reactor of claim 1, wherein said first part and said second part of said reaction chamber are the upper part and the lower part, respectively, of said reaction chamber.